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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,598	11/20/2001	J. Barry Shackleford	10017223-1	8925

7590 07/29/2004
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

HANNE, SARA M

ART UNIT PAPER NUMBER

2179

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/988,598	Applicant(s) SHACKLEFORD ET AL.	
	Examiner Sara M Hanne	Art Unit 2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4, 7-11 and 14-16 rejected under 35 U.S.C. 102(e) as being anticipated by Even-Zohar, US Patent 6738065.

As in Claims 1, 8 and 14, Even-Zohar teaches a graphical user interface, method and machine readable memory for storing the corresponding code for displaying in a first portion thereof an evolution of a solution for a genetic algorithm (Figure 3, ref. 370), an evolution parameter field in a second portion of the graphical user interface, having a first position, the evolution parameter field comprising a variable related to the evolution of the genetic algorithm (Figure 3, ref. 310), modification means for adjusting the

evolution of the solution for the genetic algorithm in real time (Column 14, lines 1-3) based upon a positional adjustment of the evolution parameter field from the first position to a second position (Column 12, line 66 et seq.) and displaying the update of the solution for the genetic algorithm within the graphical user interface (Column 3, lines 51-55).

As in Claim 2, Even-Zohar teaches the evolution parameter field as a slider ("The slider bar and value display are the key interfaces in the blending process.", Column 12, lines 66-67).

As in Claims 3 and 9, Even-Zohar teaches the evolution parameter field manipulated by a mouse controlled by the user ("The user can change the values of each characteristic by clicking or dragging on the associated slider bar.", Column 12, line 67- Column 13, line 2).

As in Claim 4 and 11, teaches the variable related to the evolution of the genetic algorithm is a number of evaluations performed in the genetic algorithm (Column 8, line 61 et seq.).

As in Claims 7 and 10, Even-Zohar teaches the modification means comprises a direct manipulation of the genetic algorithm as indicated by the positional adjustment of the evolution parameter field, the direct manipulation being accomplished by overwriting a variable used in the genetic algorithm (See Column 1 rejection *supra*).

As in Claim 15, Even-Zohar teaches that the memory exists on a server (Column 14, lines 30-33).

As in Claim 16, Even-Zohar teaches that the memory exists on a website (Column 14, lines 30-33).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Even-Zohar, US Patent 6738065, and further in view of Shackleford et al., US Patent 5970487.

Even-Zohar teaches a genetic algorithm producing real time results controlled by slider inputs. While Even-Zohar teaches such a genetic algorithm interface, they fail to show parameters such as the probability of chromosome bits being cutpoints or mutations as recited in the claims. In the same field of the invention, Shackleford et al. teaches a genetic algorithm similar to that of Even-Zohar. In addition, Shackleford et al. further teaches parameters such as a probability of any bit in a chromosome being a cutpoint in the genetic algorithm, as in Claim 5 and 12, and a probability of any bit in a chromosome being mutated in the genetic algorithm, as in Claim 6 and 13 (Figure 25 and corresponding text). It would have been obvious to one of ordinary skill in the art, having the teachings of Even-Zohar and Shackleford et al. before him at the time the

Art Unit: 2179

invention was made, to modify the genetic algorithm editing interface with slider controls taught by Even-Zohar to include parameters such as the probabilities of chromosome bits being cutpoints or mutations of Shackleford et al., in order to obtain an slider editing interface for chromosome bit probabilities. One would have been motivated to make such a combination because an interactive, visual DNA manipulation would have been obtained, as taught by Shackleford et al.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar slider controls and genetic algorithm manipulation interfaces.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara M Hanne whose telephone number is (703) 305-0703. The examiner can normally be reached on M-F 7:30am-4:00pm, off on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R Herndon can be reached on (703) 308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

smh

BA HUYNH
PRIMARY EXAMINER